

CONTRACT CHANGE ORDER MEMORANDUM

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

DATE: 12/08/2008

Page 1 of 2

TO Pete Siegenthaler, Principal TE			FILE 04-0120F4	
FROM Gary Pursell, STE / Richard Morrow, SBE			04-SF-80-13.2/13.9	
CCO NO. 77	SUPPLEMENT NO. 0	CATEGORY CODE C-H-S-A	CONTINGENCY BALANCE (including this change) \$124,135,313.40	
\$3,999,324.00			HEADQUARTERS APPROVAL REQUIRED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>				
SUPPLEMENTAL FUNDS PROVIDED \$			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
CCO DESCRIPTION: Welding Report and Green Tags			PROJECT DESCRIPTION CONSTRUCT SELF-ANCHORED SUSPENSION BRIDGE	
Original Contract Time 2490 Day(s)	Time Adj.: This Change 0 Day(s)	Previously Approved CCO Time Adjustments 30 Day(s)	Percentage Time Adjusted: (including this change) 0 %	Total # of Unreconciled Deferred Time CCO(s): (including this change) 2

THIS CHANGE ORDER PROVIDES FOR:

Providing Quality Assurance (QA) improvements for the Orthotropic Box Girder (OBG), and Tower assemblies. Quality Assurance shall be improved by increasing welding report requirements and by implementing a Quality Assurance database along with a physical tagging procedure (green tagging procedure) for fabricated assemblies. The tagging procedure, in conjunction with the database system, establishes a process that tracks, verifies, and documents incremental progress in real time for fabricated sub-assemblies and assembly stages.

Quality Control (QC) is the responsibility of the Contractor and Quality Assurance (QA) is the prerogative of the Engineer, as defined under the Standard Specifications and the Special Provisions. The established practice of the Department's QA program is such that QC processes are verified independently and separately but not until the fabricator has completed their QC process. The Department is required to accept all fabricated work, in accordance with the QA process, prior to shipment.

The SAS Orthotropic Box Girder (OBG) and tower are comprised of thousands of welded steel stiffened members. Multiple members are then joined and welded into larger sub-assemblies. All members and sub-assemblies must meet QA requirements before incorporation into larger assemblies. Resolving QA issues once members are assembled and buried in larger assemblies will be difficult without adversely impacting the schedule. Therefore, it is necessary to improve the Department's QA process to ensure the contract requirements are met continuously throughout fabrication.

Contract Special Provision Section 8-3, Welding, subcategory "Welding Quality Control", requires Contractor submission of QC welding reports every 10 days for welding completed on the project. This information is delivered in large volumes with numerous reports for completed welding non-destructive testing (NDT), repairs, repeated NDT, heat straightening, daily production logs and other documents. The contract requires QC inspection, testing, and reporting on all welding related work. However, the contract does not specify formatting or organization, of the information, and reports to be submitted.

The large volume of Contractor QC reporting documentation along with no contract specified formatting or organizational requirements has created serious challenges for the Department to fulfill its QA responsibilities in a timely manner. QA process inefficiencies are causing delays to the verification and QA acceptance process that are difficult to recover from as the workload and documentation volume increases. In addition, there is also no contractually required means to enforce traceability between the subassemblies and the submitted weld reports.

This change order provides enhanced weld reporting, a Quality Assurance database along with a fabricated assembly tagging procedure (green tagging procedure). The implementation of the database system will provide traceability, organization, and reporting functions, which will be utilized in conjunction and to support the physical tagging procedure. These enhancements will allow the Department's QA personnel to verify the QC process in a timely fashion, mitigating possible schedule delays.

The physical tagging (Green Tagging) procedure in conjunction with the QA database will provide a uniform procedure for in-process inspection verification and acceptance of OBG and Tower components. The Green Tagging procedure along with QA database provides the following:

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DATE: 12/08/2008

Page 2 of 2

1. A process that creates a direct link between subassemblies and welding reports.
2. Allows the QC/QA process to be executed efficiently.
3. Information is accessible, available, and sort able in real-time.
4. Will ensure records are reconciled before components and assemblies are shipped.
5. Subassemblies will be accepted and certified upon completion.
6. Reports (data packets) for each assembly or sub-assembly shall be generated based on Department needs.
7. Provides a progress tracking capability for fabricated sub-assemblies and assembly stages.

This change order reduces the Department's exposure to potential fabrication delays caused by the discovery of unacceptable work late in the fabrication process or after shipment due to inefficiencies in the performance of QA acceptance. This change provides a searchable and traceable database documenting the QC/QA procedures for OBG and Tower components fabricated in China.

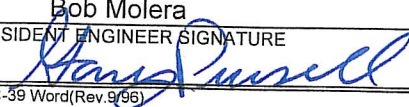
Payment to provide and input into the QA database system and implement the physical tagging (Green Tagging) procedure will be at Extra Work at Agreed Unit Price in the amount of \$2,893,461.00. Payment to provide access and use of the Contractor's database, data base software, software training, and compensation for work previously authorized by Department Authority to Proceed (ATP) will be paid as Adjustment of Compensation at Agree Lump Sum in the amount of \$1,105,863.00. This change is estimated to total \$3,999,324.00, which can be financed from the contingency fund. A detailed cost estimate is on file.

This change order work is estimated for six months with the exception being the agreed lump sum items. This change will be re-evaluated after approximately five months to determine funding needs and/or modifications needed to continue the improved QA process. If it is determined that the improved QA process will continue through the duration of fabrication, then additional cost will be determined based upon past production rates and learning curves using a measured-mile approach.

The Contractor and the Department mutually agree that this change does not warrant a time adjustment, as it does not affect the controlling operation.

This change order has concurrence from Gary Pursell (Resident Engineer), Rick Morrow (Sup. Structure Rep), Patrick Lowry (METS), Ken Terpstra (Project Manager), Pete Siegenthaler (Principal TE), Mike Forner (Principal TE) and Marwan Nader (Project Engineer). TBPOC approval was obtained on 11/6/08 for the amount not to exceed \$4,000,000.00. Design and Maintenance concurrences are not required for this change.

The Resident Engineer received an Issue and Approve (I&A) from the Division of Construction on 12/4/2008 for this change.

CONCURRED BY:		ESTIMATE OF COST	
	DATE	THIS REQUEST	TOTAL TO DATE
CONSTRUCTION ENGINEER Res. Eng. Gary Pursell, Sup. TE	10/29/08		
SR. BRIDGE ENGINEER	DATE	ITEMS	\$0.00
Struct. Rep. Rick Morrow, Sup. TE	10/30/08	FORCE ACCOUNT	\$0.00
FHWA REPRESENTATIVE	DATE	AGREED PRICE	\$2,893,461.00
		ADJUSTMENT	\$1,105,863.00
PROJECT MANAGER Proj. Manager, Ken Terpstra	11/05/08	TOTAL	\$3,999,324.00
OTHER (SPECIFY) TBPOC	11/06/08	FEDERAL PARTICIPATION	
		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
Project Engineer, Marwan Nader	12/02/08	FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)	
DISTRICT PRIOR APPROVAL BY	DATE	<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
HQ (ISSUE & APPROVE) (TO PROCEED) BY Bob Molera	12/4/08	FEDERAL FUNDING SOURCE	PERCENT
RESIDENT ENGINEER SIGNATURE	DATE		
	12/11/08		